

Product datasheet for **RG201983**

RAF1 (NM_002880) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	RAF1 (NM_002880) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	RAF1
Synonyms:	c-Raf; CMD1NN; CRAF; NS5; Raf-1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



[View online »](#)

ORF Nucleotide Sequence:

>RG201983 representing NM_002880
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGAGCACATACAGGGAGCTTGAAGACGATCAGCAATGGTTTTGGATTCAAAGATGCCGTGTTTTGATG
 GCTCCAGCTGCATCTCTCTACAATAGTTCAGCAGTTTGGCTATCAGCGCCGGGCATCAGATGATGGCAA
 ACTCACAGATCCTTCTAAGACAAGCAACTATCCGTGTTTTCTTGCCGAACAAGCAAAGAACAGTGGTC
 AATGTGCGAAATGGAATGAGCTTGCATGACTGCCTTATGAAAGCACTCAAGGTGAGGGGCCTGCAACCAG
 AGTGTGTGCAGTGTTCAGACTTCTCCACGAACACAAAGTAAAAAGCACGCTTAGATTGGAATACTGA
 TGCTGCGTCTTTGATTGGAGAAGAACTCAAGTAGATTTCTGGATCATGTTCCCTCACACACACAAC
 TTTGCTCGAAGACGTTCTGAAGCTTGCCTTCTGTGACATCTGCAGAAATTCCTGCTCAATGGATTTCT
 GATGTCAGACTTGTGGCTACAAATTCATGAGCACTGTAGCACAAAGTACCTACTATGTGTGGACTG
 GAGTAACATCAGACAACCTTATTGTTTCAAATTCCTACTATTGGTGATAGTGGAGTCCCAGCACTACCT
 TCTTTGACTATGGCTCGTATGCGAGAGTCTGTTCCAGGATGCCTGTTAGTTCACGACAGATATTCTA
 CACCTCACGCCTTCACTTTAACACCTCCAGTCCCTCATCTGAAGTTCCCTCTCCAGAGGCAGAGGTC
 GACATCCACACCTAATGTCCACATGGTCAGCACCACCCTGCCTGTGGACAGCAGGATGATTGAGGATGCA
 ATTCGAAGTCACAGCGAATCAGCCTCACCTTCCAGCCTGTCCAGTAGCCCCAACAACTGAGCCCAACAG
 GCTGGTCACAGCCGAAAACCCCGTGCCAGCACAAAGAGAGCGGGCACCAGTATCTGGGACCCAGGAGAA
 AAACAAAATTAGGCCTCGTGGACAGAGAGATCAAGCTATTATTGGGAAATAGAAGCCAGTGAAGTGATG
 CTGTCCACTCGGATTGGGTGAGGCTCTTTGGAAGTGTATAAAGGTAATGGCACGGAGATGTTGCAG
 TAAAGATCCTAAAGTTGTGACCAACCCAGAGCAATTCAGGCCTCAGGAATGAGGTGGCTGTTCT
 GCGCAAAACACGGCATGTGAACATTCTGCTTTTTCATGGGTACATGACAAAGGACAACCTGGCAATTGTG
 ACCCAGTGGTGGCAGGGCAGCAGCTCTACAAACCTGCATGTCCAGGAGACCAAGTTTCAGATGTTCC
 AGCTAATTGACATTGCCCGCAGACGGCTCAGGGAATGGACTATTTGCATGCAAAGAACATCATCCATAG
 AGACATGAAATCCAACAATATATTTCTCCATGAAGGCTAACAGTGAAAATGGAGATTTGGTTTGGCA
 ACAGTAAAGTCACGCTGGAGTGGTTCTCAGCAGGTTGAACAACCTACTGGCTCTGTCTCTGGATGGCC
 CAGAGGTGATCCGAATGCAGGATAACAACCCATTAGTTCCAGTGGATGTCTACTCTATGGCATCGT
 ATTGTATGAACTGATGACGGGGAGCTTCTTATTCTCACATCAACAACCGAGATCAGATCATCTTCATG
 GTGGGCCGAGGATATGCCTCCCCAGATCTTAGTAAGCTATATAAGAAGTCCCCAAAGCAATGAAGAGGC
 TGGTAGCTGACTGTGTGAAGAAAGTAAAGGAAGAGAGGCCTCTTTTCCAGATCCTGTCTCCATTGA
 GCTGCTCAACACTCTCTACCGAAGATCAACCGGAGCGCTTCCGAGCCATCCTTGATCGGGCAGCCAC
 ACTGAGGATATCAATGCTTGACGCTGACCACGTCCCCGAGGCTGCCTGTCTTC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

>RG201983 representing NM_002880
 Red=Cloning site Green=Tags(s)

MEHIQGAWKTIISNGFGFKDAVFDGSSCISPTIVQQFGYQRRASDDGKLTDPKTSNTIRVFLPNKQRTVV
 NVRNGMSLDCLMKALKVRGLQPECCAVFRLLEHKGKKARLDWNTDAASLIGEELQVDFLDHVPLTTHN
 FARKFTLKLAFCDICQKFLNLFRCQTCGYKFHEHCSTKVPTMCDVWSNIRQLLLFPNSTIGDSGVPALP
 SLTMRMRRESVSRMPVSSQHRYSTPHAF TFNTSSPSSEGLSQRQRSTSTPNVHMVSTTLPVDSRMIEDA
 IRSHSESASPSALSSSPNNLSPTGWSQPKTPVPAQRERAPVSGTQEKNIIRPRGQRDSSYYWEIEASEVM
 LSTRIGSGSFGTYVYKGVHGDVAVKILKVVDPTEQFQAFRNEVAVLRKTRHVNILLFMGYMTKDNLAIV
 TQWCEGSSLYKHLHVQETKQMFQLIDIARQTAQGM DYLHAKNIIHRDMKSNNIFLHEGLTVKIGDFGLA
 TVKSRWSGSQQVEQPTGSVLWMAPEVIRMQDNNPFSFQSDVYSYGI VLYELMTGELPYSHINNRDQIIFM
 VGRGYASPDLSKLYKNCPKAMKRLVADCVKVKKEERPLFPQILSSIPELLQHS LPKINRSASEPSLHRAAH
 TEDINACTLTTSPRLPVF

TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shutting:



ACCN: NM_002880

ORF Size: 1944 bp

OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

Reconstitution Method:

1. Centrifuge at 5,000xg for 5min.
2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
3. Close the tube and incubate for 10 minutes at room temperature.
4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.
5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.

RefSeq: [NM_002880.4](#)

RefSeq Size: 3245 bp

RefSeq ORF: 1947 bp

Locus ID: 5894

UniProt ID: [P04049](#)

Cytogenetics: 3p25.2

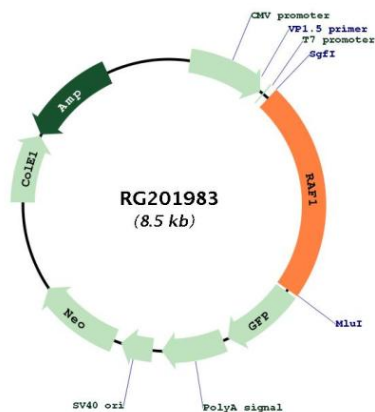
Domains: kinase, TyrKc, DAG_PE-bind, S_TKc, RBD

Protein Families: Druggable Genome, Protein Kinase

Protein Pathways: Acute myeloid leukemia, B cell receptor signaling pathway, Bladder cancer, Chemokine signaling pathway, Chronic myeloid leukemia, Colorectal cancer, Endometrial cancer, ErbB signaling pathway, Fc epsilon RI signaling pathway, Fc gamma R-mediated phagocytosis, Focal adhesion, Gap junction, Glioma, GnRH signaling pathway, Insulin signaling pathway, Long-term depression, Long-term potentiation, MAPK signaling pathway, Melanogenesis, Melanoma, Natural killer cell mediated cytotoxicity, Neurotrophin signaling pathway, Non-small cell lung cancer, Pancreatic cancer, Pathways in cancer, Progesterone-mediated oocyte maturation, Prostate cancer, Regulation of actin cytoskeleton, Renal cell carcinoma, T cell receptor signaling pathway, Vascular smooth muscle contraction, VEGF signaling pathway

Gene Summary: This gene is the cellular homolog of viral raf gene (v-raf). The encoded protein is a MAP kinase kinase kinase (MAP3K), which functions downstream of the Ras family of membrane associated GTPases to which it binds directly. Once activated, the cellular RAF1 protein can phosphorylate to activate the dual specificity protein kinases MEK1 and MEK2, which in turn phosphorylate to activate the serine/threonine specific protein kinases, ERK1 and ERK2. Activated ERKs are pleiotropic effectors of cell physiology and play an important role in the control of gene expression involved in the cell division cycle, apoptosis, cell differentiation and cell migration. Mutations in this gene are associated with Noonan syndrome 5 and LEOPARD syndrome 2. [provided by RefSeq, Jul 2008]

Product images:



Circular map for RG201983